ORDER/INVOICE/FULFILLMENT

Acctg. ONLY	Inv. Comp.	By:	Date:	Client #	Order #		Inv. #	Multi-Invoicing of

APPROVALS

ORIGINATOR (Signaure) _____ (signature) _____ DATE **Mar 12 90**

VP Sales/Res. _____ 3/12/90 _____ Date

Company _**NTT America**_
Name Mr./Ms. _**Shigeru Oyama**_ CA Tax Rate _____
Position _**Vice President**_ CT Tax 8% _____
Address _**One Landmark Square**_ Salutation _____
City _**Stamford CT 06901**_ State _____
Province _____ Zip _____
Phone _**(203) 967-9379**_ Country _____
Fax _____
Tlx _____

Controller _____ Date

Special instructions for invoicing, progress billing, or delayed payments, etc.
**Bill $22,500 now**

ORDER

Contract Year Beg. _____
End _____

☐ New Order (N1) ☐ Prior Yr (N3)
☐ Renewal (N2) ☐ Cancel

Invoice Type:
☐ Fulfillment Only
☐ W/Order (OR)
☐ Monthly (MO)
☐ Quarterly (QT)
☐ Pending

Employee # Sold by:
DAC _70_%
_TU_ _30_%
_____ %

Employee # Commission to:
_____ %
_____ %
_____ %

CLIENT AUTH.

PO# _____ INPUT Contract ☒ Letter ☐ Verbal ☐
Attach all authorizing documents to white (contract) copy.

SHIP TO

Company _____ Province _____
Name Mr./Ms. _____ Salutation _____
Position _**n/a**_ State _____
Address _____ Zip _____
Country _____
City _____ Phone _____

ITEM TYPE

- Subscription (SB)
- Custom (YC/ZC/KC)VC
- Multiclient (MC)
- Reports (RP)

- Copies (CP)
- Consult/Present (PR)
- Newsletter (NL)
- Reimbursed Costs (EX)

- Merger/Acq. (ME)
- Exec Overview (EO)
- Conf/Seminar (CN)

DETAIL

Indicate US, UK, FR, VA	Prod. ID/Year	Item Type Code	Item Description or Title	Quantity	Price	Shipped By	Date
US	ZNED	ZC	EDS in North America		$45,000		
			* Includes expenses				

Fulfillment to be completed in: ☒ Corporate ☐ London ☐ Virginia ☐ France ☐ Other _____

March 12, 1990

Mr. Shigeru Oyama
NTT America
One Landmark Square, Room 700
Stamford, CT 06901

Dear Mr. Oyama:

Thank you for returning your signed copy of the proposal under
cover of your letter of March 8, 1990. I am returning a
countersigned copy for your records.

I am sure that this will be a useful and successful project for
both our organizations.

Sincerely,

Thomas O'Flaherty
Vice President

TOF/jr

Enc.

NTT
America

NTT America, Inc.

One Landmark Square, Rm.700
Stamford, CT 06901 U.S.A.
Telephone (203) 967-9379
Facsimile (203) 325-2316

March 8, 1990

Mr. Thomas O'Flaherty
Vice President
INPUT
Parsippany Place Corporate Center
Suite 201
959 Route 46 East
Parsippany, NJ 07054-3492

Dear Mr. O'Flaherty:

Thank you for your prompt response to the proposal. I am
enclosing a copy signed by our President which also requires
your signature on Page 10.

Please return to me at your earliest convenience.

I, also, look forward to a successful project.

Sincerely,

Shigeru Oyama
Vice President

Enclosure

A Proposal to

NTT AMERICA, INC.

for a study entitled

SURVEY OF ELECTRONIC DATA INTERCHANGE SERVICE IN NORTH AMERICA

submitted by:

INPUT
Parsippany Place Corporate Center, Suite 201
959 Route 46 East
Parsippany, NJ 07054-3492
(201) 299-6999
Fax (201) 263-8341

February 20, 1990

TITLE: Survey of Electronic Data Interchange (EDI) Service in North America

OBJECTIVES:

- Understand the general situation of EDI service in North America, specifically in the U.S.

- Determine the trends in the use of standards, particularly OSI, for both EDI messages and the networks that transmit them.

- Examine the market in terms of suppliers of EDI services, networks, software, and hardware.

- Analyze the use of EDI and associated services by users in major industry sectors.

- Determine the technical characteristics of the products and services supplied for EDI.

BACKGROUND:

INPUT, the leading international EDI research firm, is particularly well suited to author this study. In addition to its ongoing survey-based research, the company has monitored EDI developments worldwide, resulting in comprehensive market studies, seminars, presentations, consulting and the monthly *EDI Reporter*, an international newsletter.

On August 31, INPUT produced a satellite-delivered EDI seminar featuring a discussion on UN/EDIFACT and its relationship to X12 in the North American user community. INPUT has published *An EDI Standards Reference Guide* as part of its EDI Program, examining issues related to this study, but on a broader scale.

INPUT has completed a major study for The Electronic Data Interchange Association analyzing the potential impact of UN/EDIFACT, an emerging EDI standard intended for international trade.

INPUT's EDI research capabilities are uniquely prepared to provide NTT with:

- An objective report that gives a factual basis about EDI to support decision making.

- A comprehensive analysis of user and vendor attitudes, issues, and expectations regarding EDI.

METHODOLOGY:

The project will start with the development by INPUT of two questionnaires from the material provided by NTT:

·   Major EDI Service Providers
·   Major Users of EDI Service

In addition, the questions developed below will be used as discussion outlines for interviews with standards setting organizations and major computer hardware companies.

INPUT will then carry out the survey as follows:

I.   Standards Setting Organizations - two telephone discussions

    ANSIX12 and TDCC/EDIA will be interviewed. Relationships with other EDI related associations (such as VICS, AIAG, API, EIDX, and CIDX) will be explored during these interviews.

    During the interviews INPUT will examine:

    A.   The areas of standardization and their development: both application and transfer protocol standards will be examined. Connectivity between the user host and network host will be investigated.

    B.   Present and future trends regarding standardization. How is convergence to EDIFACT occurring? What are the steps TDCC and X.12 are taking? What are the relationships between X.12 and EDIFACT? These are all questions that will be addressed, including the potential for replacement of X.12 by EDIFACT.

    C.   Trends in communication protocol standards including MHS and FTAM for real-time processing. The impressions that the standards organizations have of users' needs and trends will be obtained.

    About two to four pages per organization will be written up.

II.   Major EDI Service Providers (7 companies)

    One interview per company will be held with:

    ·   AT&T
    ·   One Regional Bell Operating Company
    ·   GE Information Services
    ·   Telenet Communications Corporation
    ·   IBM Information Network
    ·   British Telecom/Tymnet (previously McDonnell Douglas Tymnet unit)
    ·   MCI

These interviews will investigate the high priority items as follows:

A.   Marketing characteristics of the major vendors, specifically the following, high-priority items:

    1.   What are their profit generating resources, such as consulting, installation, education and training, network access charges, software and hardware sales to user sites, etc.?

    2.   What are their present and future strategies?

    3.   What are their charges in terms of:

        a)   Quantity of data transferred
        b)   Terminal
        c)   Fixed price
        d)   Data conversion
        e)   Data transfer
        f)   Other

    4.   Whether functions such as data conversion or code conversion are in the network, hosts or terminals.

B.   Technical characteristics. These will be gathered to the extent possible through one interview given that many of these characteristics are guarded very carefully by vendors.

For each vendor INPUT will investigate the following high priority items:

    1.   Equipment and systems:

        a)   Network configuration for both worldwide and North America using maps.

        b)   Geographic areas served through sales and access points.

        c)   Computer hardware and software used at the switches and processing centers; the number of telecommunications ports available.

        d)   User characteristics in terms of numbers, types, and targets; key users will be identified where possible.

        e)   Examples of the use of EDI services, if available, will be provided.

    2.   Protocols used now and plans for the future between the:

        a)   Network and the terminal, and
        b)   Network and the host

If there are plans for a standard protocol, which one and when introduced will be investigated.

3. Data format used between terminals and hosts. If possible, actual examples will be obtained of transaction message formats. This is unlikely to be provided.

4. INPUT will examine transfer protocols specifically relating to MHS. The potential role of X.400 will be examined for each vendor.

Again, many of these items touch on confidential and proprietary data which there is no guarantee of obtaining from the vendors.

C. Standards offered now and in the future:

1. Attitudes of the vendors to protocol standards, particularly MHS, will be ascertained.

2. Standard EDI formats (from industry groups and other) offered and planned will be collected.

D. Other characteristics:

1. Liability for incorrect or lost data.

2. Government relationship for expansion of EDI, including contracts.

3. Relationships with companies in Japan such as licensing, internet-working, joint ventures, etc.

The profiles written for each company will be two to four pages plus the documentation obtained.

Other topic areas identified by NTT will be investigated in the interviews after the high priority items, depending on the willingness of respondents to extend the interview. These topics are:

E. Marketing Characteristics

1. Procedures to start using the EDI service including training, installation, etc.

2. Market position and market share.

3. Relationships (e.g., internetworking) among providers and their perceptions of competitors.

4. Other related telecommunications network services, such as E-Mail.

F. Technical Characteristics

1. The type of EDI being provided.

2. Service relationships between EDI and ISDN, particularly where ISDN services are already offered.

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    3.   Present and future strategies for technical issues such as changes to network configurations, protocols, etc.

    4.   Source of technology - whether the current system was developed by themselves or through another company and where future changes will come from.

    5.   What are the schedules for future developments, such as the adoption of X.400, expansion of the network, etc.

    6.   Other technical issues to be addressed.

III.   Major Computer Hardware (4 companies)

One interview each will be carried out for:

- IBM
- Digital Equipment Corporation
- Tandem
- Stratus

A.   Market characteristics:

1.   Resources provided related to EDI such as hardware, software, consulting, education, etc. The specific hardware most used for EDI, the target platform (IBM, DEC, etc.) for software, variance by user, etc., will be investigated.

2.   The present and future strategies related to EDI.

3.   Pricing of EDI-related products and services (standard product prices, e.g., AS400 from IBM, will not be obtained).

4.   Company's estimates of their market share.

5.   Other telecommunications products related to EDI.

6.   Relationship with EDI service providers and competitive position.

7.   Performance data, where available.

B.   Technical characteristics:

1.   Users. The number and type of users of EDI products and services by specific EDI item will be investigated. The targeted user community and examples of typical users will be ascertained where possible. Typical uses of products and services will be requested as examples. Case studies will be obtained where possible.

2.   Present and future protocol support. As before, examining between the:

     a)   Terminal and the network
     b)   Network and the host

     If the are planning standard protocol support, which one and when will it be introduced?

3.   Present and future EDI strategies including an understanding of the importance of EDI in the organization.

4.   Service functions. The type of EDI supported by the products and services will be investigated. Particular attention will be paid to standards related issues such as X.12, MHS, and ISDN. Industry standards will also be considered. Future plans will be investigated.

5.   Other characteristics such as liability for incorrect and lost data in a customer system, government relationships for EDI and agreements for marketing in Japan will be examined.

For each company, two to four pages of written material will be provided plus documentation obtained from the company.

IV.   Major Users of EDI Service (22 companies)

Interviews will be carried out with:

·   One bank and SWIFT - the relationship between EFT and EDI will be examined.

·   One retailer and one distributor.

·   Two manufacturers - chemical, automobile, aerospace, electronic, oil, apparel, food companies are prime EDI targets. This is the largest category of EDI users.

·   One Department of Defense and one other federal agency.

·   Two travel agencies.

·   Two carriers - airlines, trains, trucks, shipping. The airlines and shipping companies have international needs.

·   One medical organization, including several hospital chains and one major educational organization.

·   Two utilities - electric power and gas.

·   Two insurance companies - 3 life, 5 health, and 5 property and casualty. Electronic claims activities will be examined.

·   Two telecommunications companies.

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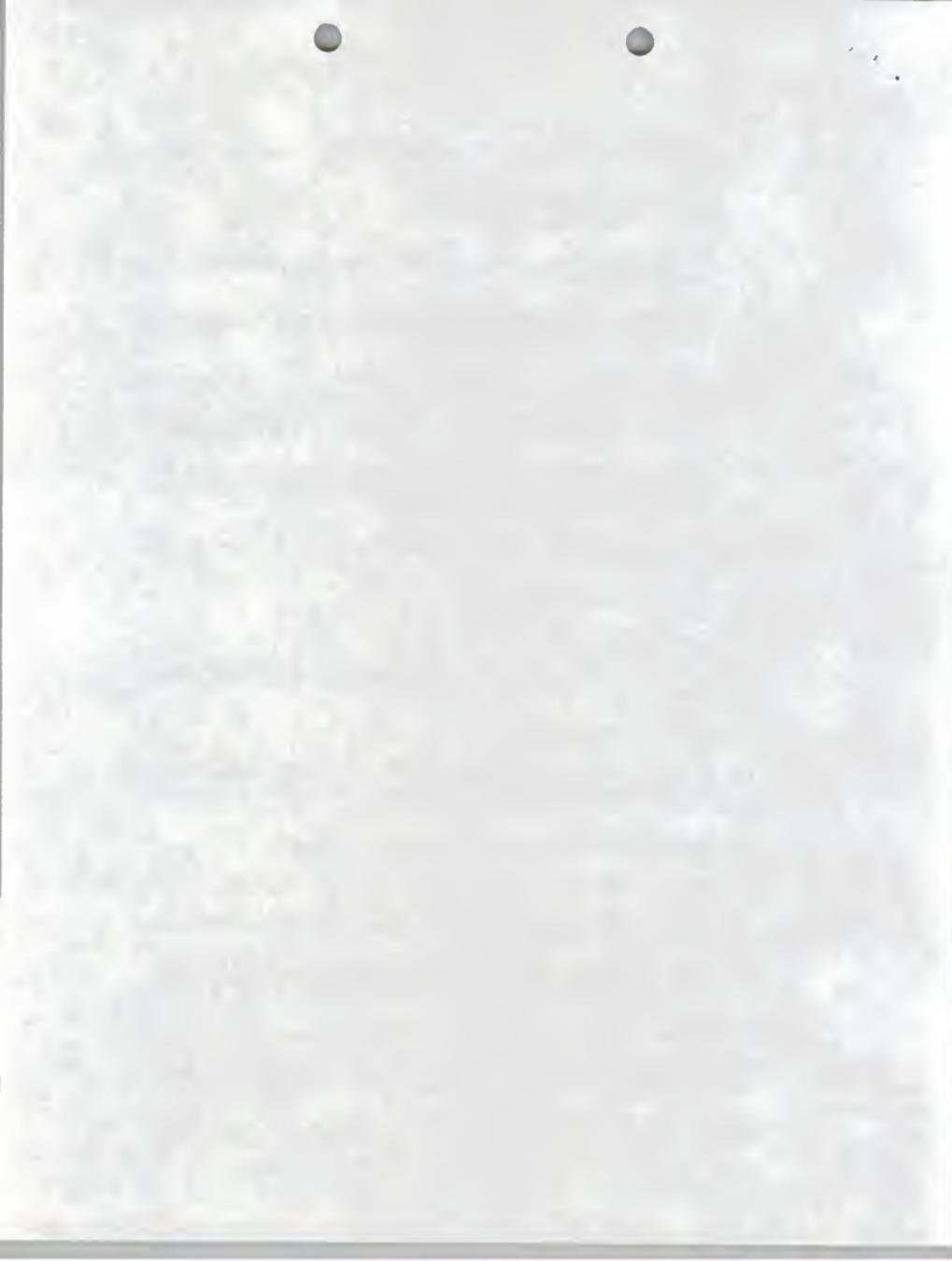
- Two other types of companies, particularly freight forwarders and services companies.

One interview with each company will be carried out to investigate:

A. Market characteristics:

High priority items:

1. What are the trends in adopting EDI? Are they using it?

2. What functions must be included in EDI services, e.g., security checks? Why do users in each industry use EDI? What applications use EDI? How satisfied are the users?

3. How are settlements done?

4. What has been the cost/benefit impact?

Other items:

5. Relationships with other target organizations, e.g., banks.

6. Use of EDI for international communications and proportion of use with Japan.

7. Phases of introduction of EDI. How did the process evolve? What were the reasons for the phases?

8. Business functions using EDI.

9. Problems with implementation of EDI, for example with customers, internal organizations, business practices, etc.

B. Technical characteristics:

To the extent possible from the interview, the system used in each case will be described including:

1. Network configuration using a diagram
2. Process sequences
3. Protocol
4. Message format(s)
5. Number of terminals
6. Quantity of data
7. Benefits and costs.

C. Other

Any relationship with government programs (particularly important for aerospace companies) and cooperation with any Japanese organizations will be investigated.

Each interview will be written up providing two to four pages of information.

INPUT will carry out the project on a "best efforts" basis. In addition, research will overlap with the EDI Program so that the interview information will be used in those reports. Research will not be modified during execution of this project.

Because of the schedule and level of effort, interaction with NTT will occur at review meetings only.

A preliminary report will be produced in April after completion of the research. This preliminary report will be reviewed with NTT. Any research to fill gaps or obtain new and/or additional data will require additional fees.

After receiving NTT's comments and suggestions INPUT will proceed to prepare the final report. These final reports will consist of the re-arranging of the data collected from the different interviews into the topic areas for the survey. This will also provide INPUT's analysis and recommendations.

INPUT will arrange two on-site meetings for NTT staff. (INPUT will not attend.)

DELIVERABLES:

Meetings and Presentations

·   A meeting will be held in Arpil in Mountain View/Los Altos to be determine to examine results and review preliminary report.

·   On completion of the final report a meeting will be held in Los Altos, California to review the report. This meeting will be held by June 1, 1990

·   INPUT will arrange two on-site meetings for NTT staff. (INPUT will not attend.)

Reports

·   An interim report will be submitted by April 30.

The report sections will be the results of the research as represented by the write-up on each company/organization interviews:

·   Standard Setting Organization
·   EDI Service Providers
·   EDI Product Suppliers
·   EDI Users

The report will be about 30-40 pages covering:

I.   Introduction
II.   Executive Summary, including any recommendations for NTT
III.   Market Conditions
        A.   Data Collected by Survey Type
        B.   Analysis by INPUT
IV.   Technical Characteristics
        A.   Data Collected by Survey Type
        B.   Analysis by INPUT

V.   Standards
     A.   Data Collected
     B.   Analysis by INPUT

Attached to the final report will be the preliminary report material including marketing literature on networks, descriptions, contracts if available, price list if available, etc.

FEES AND SCHEDULE:

The project will be accomplished on the following schedule.

Phase 1 -- To be completed by April 30, 1990

- Research and report on two standards organizations
- Research and report on EDI service providers
- Research and report on EDI product suppliers
- Research and report on EDI users

Phase 2

- Prepare final report - approximately 30-40 pages of additional material.
- May meeting to review final report in Los Altos, California.

SCHEDULE SUMMARY:

Phase 1:   Start March 1, 1990
                  Completion April 30, 1990

Phase 2:   Start May 1, 1990
                  Final report delivery by June 1, 1990
                  Final presentation, project completion by June 1, 1990

In chart form the fees are:

|	PHASE 1	PHASE 2	TOTAL
Standards organization	$3,000	--	$3,000
EDI service providers	$14,000	--	$14,000
EDI Product suppliers	$4,000	--	$4,000
EDI users meeting	$14,000	--	$14,000
Prepare final report	--	$6,000	$6,000
Review meeting	--	$4,000	$4,000
TOTAL	$35,000	$10,000	$45,000

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PAYMENT SCHEDULE:

One-half the fees ($22,500) are due and payable prior to project start.

The remainder of the fees are due and payable upon completion of the review meeting to conclude Phase 1. Expenses will also be billed at that time.

AUTHORIZATION:

To authorize the study, please sign and return a copy of this proposal.
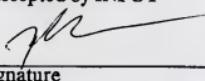
Authorized by NTT America   Accepted by INPUT
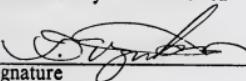
_____   _____
Signature   Signature

TAKETO   SUZUKI   Thomas   O'Flaherty
Name   Name

President   Vice President
Title   Title

March 06, '90   March 14 1990
Date   Date

PROFESSIONAL STAFF PROFILES

EDI PROJECT

Peter A. Cunningham

As INPUT's President, he will take a personal interest in this study for NTT. Mr. Cunningham has been involved with network services market analysis for 15 years and bears some responsibility for the acceptance of the term Electronic Data Interchange rather than Electronic Document Interchange popular for a short time.

Dennis G. White

Mr. White directs INPUT's custom research and consulting. His 20 years of experience includes positions as Vice President/Marketing for Tymshare's Information Network Services Division and Tymnet, where he was responsible for EDI services. He was also Director of Marketing for Boole & Babbage and Syntelligence. Mr. White has been responsible for implementing business strategies, market planning acquisitions, start-ups, and business opportunity evaluation. He holds a B.S. in engineering from Northwestern University and a MBA from Washington University.

Thomas O'Flaherty

Tom O'Flaherty is Vice President of INPUT's New York regional office. His experience includes over 100 research and consulting assignments for clients ranging from start-ups to Fortune 500 in the information services industry. His personal expertise includes market research, strategy consulting, and the market assessment of new technologies. Tom came to INPUT from Broadview Associates where he was responsible for professional support functions including company analysis, client consulting, and proprietary data base development. He has a B.A. from Colgate University.

R. Dennis Wayson

Denny Wayson is Vice President of INPUT. He has over 20 years of experience in many areas of the information services industry. During his career at INPUT he has been responsible for a variety of activities including the management of the U.S.-based research staff, user and vendor programs, and custom research. As a senior manager he is a key player in all INPUT plans and activities. He has held positions with Bank of America in the management of user-based systems (worldwide) and he was Director of Information Systems and Technology at Sun Company for many years. He is also a popular speaker at industry conferences and a consultant to top companies around the world. He holds a B.S. degree from Lehigh University and a M.S. in Operations Research and Computer Science from Cornell University.

Torrey Byles

Torrey Byles' INPUT specialty is Electronic Data Interchange. Before joining INPUT, Mr. Byles covered EDI for the Journal of Commerce, a Knight-Ridder business daily. He wrote frequently for trade magazines on EDI including Computerworld, MIS Week, and Women's Wear Daily. Mr. Byles has seven years experience as a journalist in the electronics, computers, and information technologies fields. He was a correspondent based in Taiwan where he covered the consumer electronics industries of East Asia. He holds a B.A. in Economics from the University of California.

Norman Litell

Mr. Litell is a Principal Consultant with INPUT. He has over 20 years of diversified experience in information services, including executive responsibility for operations, applications development, and consulting in major international financial institutions. His primary focus is on managerial issues facing end users in banking, finance, and other industries where information technology is a key strategic factor. Before joining INPUT, he was Vice President and Manager of Consulting Services at Bank of America. Mr. Litell has a MBA from Harvard Business School, and completed all requirements except the dissertation for a DBA (doctorate) specializing in International Business.